

# US359

## Trallfa C5.3 Electrical Service (In Plant Only)

The goal of this class is to teach students how to identify the electrical components, theory of operation, and proper troubleshooting procedures. Approximately 30% of the course is hands-on troubleshooting of actual robot systems.



### Topics include:

- Operation of robot control and mechanical unit
- Safety precautions used while troubleshooting electrical system
- Description of components in the robot controller
- Principles of logical troubleshooting from power up, through emergency stop loop and servo system
- How to properly set-up and troubleshoot the robot purging system
- Use of the fiber optic test kit for troubleshooting

### Course objectives

After successfully completing the course, the participant should be able to:

- Correctly practice all areas of safety that pertain to robot operation
- Demonstrate proper start-up, operation and shut-down of the robot system
- Accurately identify the principal components and circuit boards of the robot system
- Correctly remove and replace circuit boards with CMOS circuitry which prevents personal injury and component damage
- Correctly respond to the various types of error code
- Troubleshoot the robot electrical system to major component level
- Configure the jumpers on the control PC boards
- Demonstrate the proper procedure for replacement and adjustment of the measurement system
- Use correct procedures for reporting robot problems and ordering spare parts
- Troubleshoot fiber optic errors

### Student profile

- Industrial electricians
- Electrical service technicians
- Engineers
- Supervisory personnel

### Prerequisites

- Familiarity with use of electronic test equipment (voltmeter)
- Basic understanding of digital electronics is helpful
- C5.3 robot programming US315 is recommended

### Duration

The course duration is 4.5 days.

### Customer Service – Robotics

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